Robotics and Computer Integrated Manufacturing

Volume 18 (2002)
Volume Contents and Author Index

Pergamon

Robotics and Computer Integrated Manufacturing

An international journal of manufacturing and product and process development

MANUFACTURING

Emphasis is on disseminating the application of research to the development of new or improved industrially-relevant manufacturing technologies and strategies whose initial feasibility has been demonstrated either in a real manufacturing enterprise or experimentally in a laboratory.

Case-studies describing technology transfer and deployment from research institutions to industry or the implementation and scale-up of new technologies in industry, are especially encouraged.

Original papers are welcomed in the areas of rapid-response manufacturing, global manufacturing, flexible automation, mechatronics, computer-controlled machinery and processes, micromechanical systems, robotics, rapid prototyping, concurrent engineering and other fields involving unique manufacturing techniques.

PRODUCT AND PROCESS DEVELOPMENT

Product and Process Development is an outlet for creative research and development ideas in integrated products and process development.

Papers are welcomed in the broad areas of integrated product and process development, enterprise integration, life cycle engineering, global manufacturing, green products, recycling issues, rapid modelling, analysis and decision-making methodologies, quality, reliability and durability engineering, collaborative environments, integration of CAD/CAM/CAE and product information tools, information modelling, representation schemes and data models, knowledge based engineering, materials engineering, Internet and virtual team environments, multi-objective optimization and fuzzy mathematics and system integration issues for collaborative design. In addition *Process and Product Development* covers topics which have traditionally been considered beyond the scope of the product development process. These topics include the people involved, information infrastructure, management and control systems, engineering issues, business issues, and the tools to support the product development process.

Both sections publish editorials, state-of-the art reviews, letters to the Editor and occasional special issues on topics of current interest.

PII: S0736-5845(02)00043-1

CONTENTS OF VOLUME 18

Number 1

MANUFACTURING

S. V. Wong and **A. M. S. Hamouda** 1 Development of genetic algorithm-based fuzzy rules design for metal cutting data selection

H.-Y. Hsu and **G. C. I. Lin** 13 Quantitative measurement of component accessibility and product assemblability for design for assembly application

S. Aomura and **A. Koguchi** 29 Optimized bending sequences of sheet metal bending by robot

PRODUCT AND PROCESS DEVELOPMENT

X. Zhang, B. Zhou, Y. Zeng and **P. Gu** 41 Model layout optimization for solid ground curing rapid prototyping processes

L. Li, N. Schemenauer, X. Peng, Y. Zeng and **P. Gu** 53 A reverse engineering system for rapid manufacturing of complex objects

A. Akgunduz, D. Zetu, P. Banerjee and **D. Liang** 69 Evaluation of sub-component alternatives in product design processes

Number 2

MANUFACTURING

M.-S. Lu and **G. J. Wiens** 83 Predictive pull-based control of an unmanned manufacturing cell, accounting for robot mobility

E. J. González-Galván, F. Pazos-Flores, S. B. Skaar and **A. Cárdenas-Galindo** 95 Camera pan/tilt to eliminate the workspace-size/pixel-resolution tradeoff with camera–space manipulation

Y. Hazony 105 Rule-based process-cell, monitor and control design

H. I. Bozma and **H. Yalçin** 125 Visual processing and classification of items on a moving conveyor: a selective perception approach

PRODUCT AND PROCESS DEVELOPMENT

H.-F. Wang and **Y.-L. Zhang** 135 CAD/CAM integrated system in collaborative development environment

K. Gierach, D. Thompson and **P. Banerjee** 147 An approach for facilitating service management in networked virtual manufacturing environments

N. Singh 157 Integrated product and process design: a multi-objective modeling framework

Numbers 3–4

SPECIAL ISSUE:
11th International Conference on Flexible Automation and Intelligent Manufacturing

	169	Editorial
M. M. Ahmad and **N. Dhafr**	171	Establishing and improving manufacturing performance measures
F. Nabhani and **T. Shaw**	177	Performance analysis and optimisation of shape recognition and classification using ANN
H. Golnabi	187	Simulation of an optical sensing system for automatic object tracking
U. Buehlmann and **R. E. Thomas**	197	Impact of human error on lumber yield in rough mills
D. Van Goubergen and **H. Van Landeghem**	205	Rules for integrating fast changeover capabilities into new equipment design
J. C. Hartman and **J. Ban**	215	The series–parallel replacement problem
D.-W. Kim, K.-H. Kim, W. Jang and **F. F. Chen**	223	Unrelated parallel machine scheduling with setup times using simulated annealing
Q. Huang, S. Zhou and **J. Shi**	233	Diagnosis of multi-operational machining processes through variation propagation analysis
K. P. Ellis, J. E. Kobza and **F. J. Vittes**	241	Development of a placement time estimator function for a turret style surface mount placement machine
W. G. Sullivan, T. N. McDonald and **E. M. Van Aken**	255	Equipment replacement decisions and lean manufacturing
S. H. Masood and **A. Soo**	267	A rule based expert system for rapid prototyping system selection
R. R. M. da Cunha and **A. Dias**	275	A feature-based database evolution approach in the design process
B. Bhattacharyya, S. Mitra and **A. K. Boro**	283	Electrochemical machining: new possibilities for micromachining
G. V. Nenov and **T. Szécsi**	291	Increasing CNC machine tool productivity by using tool-part touch control
R. Marshall, K. Case, R. Oliver, D. E. Gyi and **J. M. Porter**	297	A task based 'design for all' support tool
J. Efstathiou, A. Calinescu and **G. Blackburn**	305	A web-based expert system to assess the complexity of manufacturing organizations
G. Wullink, M. M. T. Giebels and **H. J. J. Kals**	313	A system architecture for holonic manufacturing planning and control (EtoPlan)
J. F. Persson	319	The impact of different levels of detail in manufacturing systems simulation models
A. Dupon, I. Van Nieuwenhuyse and **N. Vandaele**	327	The impact of sequence changes on product lead time

Numbers 5–6

MANUFACTURING

C.-H. Xiong, Y.-F. Li, Y. K. Rong and **Y.-L. Xiong**	335	Qualitative analysis and quantitative evaluation of fixturing
P. G. Benardos and **G. C. Vosniakos**	343	Prediction of surface roughness in CNC face milling using neural networks and Taguchi's design of experiments
G. C. Smith and **S. S.-F. Smith**	355	An enhanced genetic algorithm for automated assembly planning
D. M. Pelinescu and **M. Y. Wang**	365	Multi-objective optimal fixture layout design
C. Mascle	373	Feature-based assembly model for integration in computer-aided assembly
N. Asakawa, K. Toda and **Y. Takeuchi**	379	Automation of chamfering by an industrial robot; for the case of hole on free-curved surface
F.-T. Cheng and **C.-Y. Teng**	387	An object-based controller for equipment communications in semiconductor manufacturing
D. I. Kosmopoulos, T. A. Varvarigou, D. M. Emiris and **A. A. Kostas**	403	MD-SIR: a methodology for developing sensor—guided industry robots
	421	Announcement
	III	Contents Index to Volume 18 (2002)
	VI	Author Index to Volume 18 (2002)